

## 3.

## Miscellaneous Notes on the Eggs and Young of Reptiles.

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Everyone who is in close daily contact with an extensive collection of living reptiles soon accumulates an assortment of notes, which, while interesting in themselves, fail to fit the pattern of his contemplated papers. Thus we have assembled miscellaneous data on some 38 clutches of eggs and broods of young which, except as noted, were laid or hatched in the reptile house in the Philadelphia Zoological Garden. These data, while fragmentary in spots, we append below with the hope that like Klauber's (1938) "odd items of general interest," they may prove of use. At least we are fortified by the thought that with startlingly few exceptions the life histories of most reptiles are so poorly known that even scraps of information about them are welcome additions to herpetological knowledge.

The data available in the literature on this subject have come chiefly from captive specimens. The chances of observing egg-laying or hatching in the field are slight, and far more can be learned by maintaining gravid females in captivity under conditions as closely approximating natural ones as possible. Professional curators have contributed much information but here is a big field for the amateur herpetologist to make useful observations. All he needs is an ability to record data accurately, an inexpensive meter stick, and a friendly corner druggist who does not mind having his scales used in the interests of science.

Our weights and measurements were recorded as soon after laying or hatching as was convenient—usually on the same or the following day. Eggs were incubated in aquaria or glass jars nearly filled with moist, decayed wood. A flat piece of glass placed on top of each vessel served as a lid and permitted control of the moisture content within each one. When the under-surface of the glass "sweated" appreciably the lid was moved slightly to one side to allow evaporation. Conversely, when the hatching media became too dry it was sprinkled with water and the lid was replaced. Ordinary room temperatures prevailed during the incubation periods.

The weights and measurements of all female specimens were recorded after their eggs were laid. All weights are recorded in grams and all measurements in millimeters.

The letters "H" and "L" indicate the highest and lowest numbers, respectively, in each column of figures, thus representing the extremes of variation in each group. Unusually abnormal specimens are excepted. In cases where the highest and lowest figures appear more than once, only the first is designated by a letter.

For help in taking weights and measurements and in securing other data we are indebted to Mark Mooney, Jr., and to Edmond Malnate, successive superintendents of the reptile collection in the Philadelphia Zoological Garden. Several members of the Junior Zoological Society of Philadelphia also have given valuable assistance.

*Alligator mississippiensis* (Daudin).

A number of alligators, apparently recently hatched, were discovered along the swampy margins of a large pool on St. Simon's Island, Georgia, about August 20, 1937, by Robert S. Ingersoll, Jr. There were about 36 specimens in the group, but not all of them were captured. Measurements and weights were recorded when the alligators arrived at the Philadelphia Zoological Garden a few days later.

No.	Length	Weight	No.	Length	Weight
1	241	53.2	11	243	46.5
2	233	50.9	12	244	52.6
3	249	51.9	13	251	52.5
4	252	56.4—H	14	247	51.7
5	231—L	42.9	15	257—H	52.6
6	247	53.2	16	247	52.5
7	247	47.0	17	244	51.2
8	249	53.2	18	236	42.7—L
9	237	48.7	19	232	47.6
10	241	43.0			
			Average	243.58	50.02

*Basiliscus vittatus* (Gray).

Eggs found scattered about on the floor of the cage on June 29, 1937; all separate from one another. Shells buff, ovoid and rather soft. Female and male in captivity since March 20, 1935. Both were confined in same cage but eggs were infertile. The shell of egg No. 10 was badly dented.

No.	Length	Width	Weight
1	18.7—H	10.9	1.40
2	17.7	11.1	1.31
3	18.3	11.7	1.60—H
4	17.4	12.6—H	1.50
5	18.3	10.5	1.25
6	16.9	10.8	1.40
7	17.0	10.4	1.09
8	16.2	11.3	1.05
9	17.8	10.5	1.25
10	15.0	10.1	.65
11	15.6—L	11.5	1.10
12	16.2	10.0—L	.91
13	16.4	12.0	1.10
14	15.9	11.1	.90—L
Average	16.96	11.04	1.18

*Sceloporus undulatus fasciatus* (Green).

Group of eggs brought to the Philadelphia Zoo about August 1, 1938. Donor could not furnish the locality where they were found, but stated it was in southern New Jersey.

No.	Total Length	Length (snout to vent)	Weight
1	45—L	22—L	0.4
2	46	22	0.4
3	49—H	23—H	0.3
4	45	22	0.3
Average	46.25	22.25	0.35

Egg No. 1 hatched on August 8, the others on August 11.

*Ophisaurus apodus* (Pallas).

Eggs found on July 20, 1937, in a cage occupied by several large, adult specimens received on June 9, 1937, from the Zoological Society of London. Probably the two eggs did not constitute the entire complement from any one female, but no others were laid.

No.	Length	Width	Weight
1	33.4	18.7	6.45
2	33.2	18.4	6.00
Average	33.3	18.55	6.23

*Furancina abacura abacura* (Holbrook).

A large female of this subspecies was found about August 20, 1937, coiled around her eggs under a large log on St. Simon's Island, Georgia, by Robert S. Ingersoll, Jr. There were approximately 15 or 20 eggs but unfortunately some of them were destroyed in transit to Philadelphia and the exact number could not be determined. Two of the eggs were hatched on October 9, 1937.

No.	Length	Weight
1	204	4.8
2	231	6.2
Average	217.5	5.5

Specimen No. 1 was deformed, its tail being kinked in an S-shape.

*Ophedryx aestivus* (Linnaeus).

A female specimen collected at Royal Oak, Talbot County, Maryland, on July 2, 1938, was kept alive at Treasure Island Boy Scout Camp, where it deposited 9 eggs on July 13. The eggs subsequently were given to the Philadelphia Zoological Garden, where they began hatching on September 9, 1938.

No.	Length	Weight
1	183	1.3
2	201—H	1.4—H
3	190	1.2
4	182	1.1—L
5	191	1.3
6	180—L	1.4
7	192	1.3
8	187	1.2
9	190	1.2
Average	188.4	1.27

When the eggs first were discovered to be hatching one snake had completely escaped from the shell, another had its head half-way out of the egg and a third had the tip of its nose exposed. Six young had escaped by the morning of September 10; the numbers of slits made by these snakes in their respective egg shells were 5, 3, 2, 2, 2 and 1. All the young were very timid, drawing their heads back into the shells when an observer approached, or hiding in the hatching media after they had left the eggs. The last snakes escaped from their eggs on September 11. On this date the eyes of all were overcast, preparatory to shedding. The young were uniformly greenish-gray in coloration at first, but changed to uniform light green upon shedding their skins.

*Coluber constrictor constrictor* Linnaeus.

A clutch of eggs of this species was found buried in the earth by H. Leschke at Haddonfield, N. J., on June 19, 1936. They were stained brown, and salt-like protuberances on the shells made them rough to the touch.

No.	Length	Width	Weight
1	28.0	22.4	8.1
2	26.8—L	22.9	7.8
3	32.3	20.4—L	7.4
4	31.0	22.0	8.3
5	29.8	22.1	8.0
6	27.3	23.2	7.8
7	27.5	21.7	7.1—L
8	29.5	21.9	8.3
9	27.0	23.7—H	8.3
10	29.5	22.0	7.8
11	29.0	22.4	8.1
12	28.2	21.8	7.3
13	29.7	20.8	7.9
14	31.0	21.7	8.4
15	27.7	22.8	7.2
16	28.5	22.4	7.7
17	33.7—H	21.4	8.5
18	29.8	20.5	7.3
19	31.9	22.0	8.7—H
20	30.0	21.5	7.6
Average	29.41	21.98	7.88

Twelve of these eggs hatched between August 7 and August 12, 1936.

No.	Length	Weight
1	278	5.2
2	288	5.2
3	275	6.1
4	272	4.6
5	279	5.8
6	282	6.0
7	256	4.5—L
8	253—L	4.5
9	265	5.0
10	305—H	6.2—H
11	294	5.6
12	284	5.8
Average	277.5	5.38

A group of 15 eggs of the same species was laid on June 6, 1938, in a cage containing several females, all caught a short time before near Philadelphia. Determination of which adult laid the eggs was impossible, but it was presumed that the entire lot was deposited by one female. All the eggs were white, the shells had salt-like protuberances on them and all except No. 11 were approximately the same size.

No.	Length	Width	Weight
1	35.6	18.2	7.5
2	36.3	18.6	8.0
3	32.1	20.0—H	7.9
4	33.7	19.4	7.7
5	36.7	19.2	7.8
6	33.6	19.6	8.3
7	34.1	19.8	7.8
8	37.6	18.4	7.3—L
9	31.7—L	19.4	7.5
10	34.9	18.6	8.0
11	46.5—H	17.4—L	8.3
12	35.0	19.4	8.1
13	35.5	19.7	8.6—H
14	37.4	18.9	7.9
15	33.6	19.5	—
Average	35.62	19.07	7.9 (of 14)

Eggs No. 14 and No. 15 each had one end prolonged into a tip, and No. 15 was broken and leaking when found.

Four of the above eggs hatched in August, 1938, three on the 13th and the fourth on the 15th.

No.	Length	Weight
1	309	6.3
2	294—L	5.95—L
3	336—H	6.8—H
4	303	6.4
Average	310.5	6.36

*Elaphe obsoleta obsoleta* (Say).

A female, probably from near Philadelphia, deposited 11 eggs in captivity on July 24, 1937. Five of these were separate but the others were adherent in pairs. Very probably the snake was disturbed during ovoposition; several specimens of other species were confined in the same cage with it.

No.	Length	Width	Weight
1	50.8	20.2	13.7
2	55.5—H	19.7	14.95
3	43.8	22.4	12.23
4	48.0	18.2	10.15
5	44.9	17.4—L	9.15
6	47.2 <sup>1</sup>	21.7 <sup>1</sup>	
7	46.3}	23.7}{—H	27.8
8	47.7{	22.5{	
9	45.5}	22.3}	26.7
10	45.6{	22.5{	
11	43.5}{—L	22.6}	25.8
Average	47.16	21.2	12.77

Egg No. 4 had a marked constriction around its middle.

<sup>1</sup> Eggs which were adherent to each other. The measurements of eggs in such condition are grouped by brackets and their combined weights are expressed by one number, a policy followed throughout the text.

Two of the above eggs hatched on October 9, 1937.

No.	Length	Weight
1	361	10.3
2	360	11.2
Average	360.5	10.75

*Elaphe vulpina* (Baird & Girard).

Three large females collected by Robert H. Mattlin in May, 1938, at Little Cedar Point, Lucas County, Ohio, all deposited eggs during July, 1938. In two instances, many of the eggs were adherent, making it impossible to measure them and necessitating the weighing of them in groups as indicated in the tables below. In only one case was it possible to determine which female laid which eggs. Her weight and length are recorded in their proper place.

I. Eggs laid on July 20, 1938.

No.	Length	Width	Weight	
1	43	24	161.7	
2	43	25		
3	39	25		
4	42	25		
5	42	—		
6	43	—		
7	39	—		
8	46	24		
9	40	—		
10	41	24		
11	42	24		
12	36—L	24		13.8
13	44	24		16.1
14	47—H	27		14.9
Average	41.93	24.6 (of 10)	14.75	

II. Eggs laid on July 21, 1938. Length of female, 1229 mm.; weight, 409.5 g.

No.	Length	Width	Weight
1	47.3	25.7	18.9
2	47.0	24.1	17.3
3	48.2	24.0	18.7
4	50.4	24.5	18.5
5	48.0	25.8—H	19.3
6	42.9	23.7	14.8
7	38.1—L	22.3—L	84.8
8	48.9	24.0	
9	51.2	24.1	
10	44.8	24.2	
11	58.5—H	23.3	
Average	47.75	24.15	17.48

Five of the eggs in this group hatched in September—three on the 1st and two on the 5th.

No.	Length	Weight
1	306	14.4
2	334—H	15.4—H
3	333	14.0
4	300—L	11.9—L
5	331	14.3
Average	320.8	14.0

III. Eggs laid on July 23, 1938. All were separate, probably because the female moved about while depositing them. The moist substance with which they were covered when laid was sufficiently adhesive to make pebbles from the cage floor stick to several of the eggs.

No.	Length	Width	Weight
1	39.9	26.9	16.65
2	40.7	24.5	14.4
3	40.7	26.1	15.4
4	37.8	27.3—H	16.2
5	44.4	23.5	14.4
6	29.1—L	25.0	14.7
7	45.0	22.9—L	15.0
8	47.2—H	25.0	16.5
9	41.8	24.4	14.8
10	40.4	24.4	14.3
11	40.6	24.6	14.9
12	38.4	24.3	14.1
13	42.9	27.3	18.5
14	45.7	26.9	19.8—H
15	42.8	24.3	14.5
16	39.9	26.1	15.8
17	43.1	27.2	13.9
18	41.9	26.3	18.1
19	35.7	25.5	13.6
20	38.1	24.6	13.4—L
21	38.6	26.3	15.1
Average	40.7	25.38	15.43

*Pituophis melanoleucus melanoleucus* (Daudin).

Two females from undetermined localities in southern New Jersey laid eggs in July, 1938. Many of the eggs in each group were adherent to one another, preventing complete measurements and separate weighings.

I. Eggs laid on July 12, 1938. Length of female, 1514 mm.; weight, 952.3 g.

No.	Length	Width	Weight
1	53	34	285.85
2	49	35	
3	—	33	
4	48	35	
5	49	34	
6	53	—	
7	—	34	
8	61	32	32.3
9	49	33	
Average	51.71 (of 7)	33.75 (of 8)	35.35

Two of the above eggs hatched on September 19, 1938.

No.	Length	Weight
1	412	35.8
2	376	26.8
Average	394.0	31.3

## II. Eggs laid on July 13, 1938.

No.	Length	Width	Weight
1	57	33	155.0
2	—	32	
3	58	33	
4	59	34—H	
5	60	32	76.4
6	57	33	
7	66	31—L	39.9
Average	59.5 (of 6)	32.57	38.76

The eggs in this group started to hatch on September 18, and the last of the 7 emerged on the 20th. There were as many as 5 and 6 slits in some of the eggs and in one or two of them 2 or more slits crossed, to form loose flaps.

No.	Length	Weight
1	433	36.5—H
2	452—H	36.5
3	416—L	34.5—L
4	433	35.4
5	416	35.0
6	429	35.0
7	437	36.1
Average	430.86	35.57

The young snakes might be described as follows:

Ground color (above) yellowish-cream, becoming orange or brownish-cream on the sides. Dorsal blotches very dark brown (almost black), the most anterior dorsal ones enclosing two rather small, light areas. The orange or brownish coloration on the sides is caused by the anterior parts of the scales being of these colors. Some scales also have a longitudinal streak of the same colors on them.

Top of head olive-gray, marked with a few dark spots. A dark line across in front of the eyes, situated on the anterior edges of the frontal and supraoculars and the posterior edges of the prefrontals. A short, dark dash, obliquely downward from the back of the eye; another straight down from the eye. Some of the sutures between the upper labials dark. Belly whitish, washed with orange-pink.

*Lampropeltis getulus floridana* Blanchard.

Female collected 20 miles west of Miami, Florida, and sent to the Philadelphia Zoological Garden through the courtesy of Dr. Thomas Barbour. Eggs were deposited on May 19, 1936. Length of female, 1047 mm.; weight, 282.2 g.

No.	Length	Width	Weight
1	47.7	22.0—L	13.4
2	50.0—H	22.6	13.8—H
3	36.8	23.8—H	11.2
4	38.9	22.9	11.0
5	43.2	23.0	13.2
6	33.0—L	23.4	9.8—L
7	38.9	23.2	12.3
8	40.4	22.9	12.4
9	38.6	23.6	12.0
10	47.0	23.0	13.6
11	44.3	22.8	13.4
Average	41.70	23.01	12.37



Egg No. 2 had a constricted nipple at one end and No. 6 had a flesh-colored area covering about one-third of the egg. All other eggs were plain cream white, with smooth, parchment-like shells. Numbers 7 to 11, inclusive, were adherent in a single cluster but were separated for weighing and measuring. Several young had escaped from their shells when the clutch was examined on July 26, 1936, and the last emerged on July 27. Two eggs were not fertile.

No.	Length	Weight
1	290	11.1
2	285	9.4—L
3	289	10.5
4	277—L	10.8
5	300—H	11.1
6	282	11.0
7	295	12.3—H
Average (of 7)	288.2	10.89
8	232	7.8
9	216	5.5
Average (of 9)	274	9.93

The last two specimens obviously were runts. In addition their sides were somewhat shrunken except in the region of the belly, which was noticeably swollen. They lived only a few days. The other specimens began eating DeKay's snakes, *Storeria dekayi*, and one another almost at once: eventually only one specimen remained.

*Rhinocheilus lecontei* Baird & Girard.

Eggs were found in the cage on July 1, 1935. The female was purchased from a dealer and its origin is unknown.

No.	Length	Width	Weight
1	37.0	15.9	7.1
2	36.2	16.0—H	6.7
3	37.2	16.0	6.6
4	41.0—H	15.4	7.2—H
5	35.6	15.8	6.5
6	30.1—L	15.3—L	5.3—L
Average	36.18	15.73	6.57

*Natrix cyclopion floridana* Goff.

Two specimens from Marion County, Florida, bore young in captivity.  
I. Young born on July 27, 1936.

No.	Length	Weight
1	249—H	8.3—H
2	248	7.0
3	229	6.3
4	230	5.9—L
5	240	7.5
6	229	6.2
7	245	7.0
8	248	7.0
9	234	6.9
10	233	7.1
11	225	6.6
12	243	8.1
13	244	7.9
14	222—L	6.0
Average	237.07	6.99

This litter probably consisted of more than 14 specimens since some had escaped from the cage and were found on the floor. Number 4 had its hemipenes everted; No. 14 was dead. The pattern of the young snakes was more conspicuous than that of adults; it consisted of black reticulations on an olive-brown ground. Their bellies were plain yellow except for the antero-lateral edges of the ventrals, which were black.

II. Young born on August 7, 1936. Length of female, 1389 mm.; weight, 686.6 g.

No.	Length	Weight
1	245	9.0
2	259—H	9.2
3	241	7.6—L
4	257	9.1
5	250	8.9
6	244	8.4
7	245	8.0
8	240—L	8.7
9	246	8.7
10	251	9.6—H
Average	247.8	8.72

*Natrix erythrogaster transversa* (Hallowell).

A litter was born on September 5, 1933, to a female collected in Kansas and presented to the Toledo Zoological Park by Dr. Reeve M. Bailey. The parent measured 1071 mm. and weighed 335.1 g.

No.	Length	Weight
1	255	6.0
2	267	5.9
3	268	6.4—H
4	256	6.1
5	250—L	5.6
6	267	6.0
7	262	6.1
8	268	6.4
9	257	6.2
10	270	6.2
11	264	6.1
12	261	6.1
13	266	6.3
14	267	6.3
15	258	5.8
16	255	6.0
17	265	5.9
18	271—H	6.3
19	271	5.7
20	265	5.5—L
Average	263.15	6.05

An additional specimen (not recorded) was born dead. The living young might be described as follows:

Pattern (above) consists of a dorsal and lateral series of blotches alternating clear forward to the head. In the center of each light area, on the sides between the black blotches, is a large area of rose-brown, narrowly edged with white. Belly uniform white except for the antero-lateral edges of the ventrals, which are black.

These small snakes began eating chopped fish almost at once. As they grew they were measured and weighed at intervals. On December 9, 1933, they averaged 259.3 mm. and 6.61 g.; on April 5, 1934, 19 of them (one having died) averaged 306.8 mm. and 10.90 g.; on June 13, 1934, 331.6 mm. and 13.33 g. All but 3 had died by May 2, 1935, when the survivors averaged 420 mm. and 26.70 g. These snakes did not hibernate; they were kept warm and active over both winters.

Several young of this subspecies were born at the Toledo Zoological Park during September, 1930, to a female from New Braunfels, Texas. They grew rapidly in captivity on a diet of fish, but as a result of cannibalism the group eventually was reduced to one. This, a female, passed a large, red, infertile ovum on September 2, 1933, and two others on September 4, 1933. Thus it would appear that the snake was sexually mature at the age of three years. At that time it weighed 429.7 g. and measured 960 mm. in length. While it was still light in color, its pattern had become rather indistinct and the contrast between blotches and ground color was considerably lessened. The light crossbands between the dorsal blotches were the most prominent feature of the pattern.

*Natrix septemvittata* (Say).

Two females of this species from Detroit, Michigan, gave birth to young on August 23, 1938. Since both females were in the same cage it was impossible to determine how many each had borne.

<i>No.</i>	<i>Length</i>	<i>Weight</i>
1	212	2.8
2	221	2.6
3	222	3.3—H
4	215	2.6
5	222	3.2
6	223	3.3
7	227	3.1
8	226	3.2
9	225	2.8
10	218	2.7
11	216	2.6
12	206—L	2.3—L
13	230—H	3.1
Average	220.2	2.89

Another female from Delaware County, Pennsylvania, bore 2 young and passed 2 dead embryos and 2 infertile ova on August 22, 1938. The female weighed 52.9 g. and measured 688 mm. Data on the 2 living young are:

<i>No.</i>	<i>Length</i>	<i>Weight</i>
1	168	1.4
2	206	2.5
Average	187	1.95

No. 1 was deformed.

*Natrix sipedon pictiventris* Cope.

Young were born on August 2, 1936, to a specimen from near Palmetto, Florida, collected by the late C. C. Goff. The female weighed 368.9 g. and measured 771 mm. in length. Most of its tail was missing.

No.	Length	Weight
1	211	3.3
2	213	3.4
3	194	3.2
4	215	3.5
5	206	3.5
6	208	4.0
7	217	3.9
8	213	4.2
9	215	3.7
10	180—L	2.9—L
11	210	4.3
12	211	4.0
13	199	3.7
14	205	3.4
15	223—H	3.8
16	217	4.2
17	201	4.0
18	200	3.9
19	206	4.4—H
20	199	3.7
21	221	3.7
22	192	3.2
23	206	3.7
24	204	3.5
25	218	4.1
Average	<hr/> 207.36	<hr/> 3.73

No. 24 and No. 25 were dead.

*Thamnophis sirtalis sirtalis* (Linnaeus).

A specimen from Philadelphia, Pennsylvania. Young born on August 4, 1936. Length of female, 706 mm.; weight, 92.2 g.

No.	Length	Weight
1	143	1.1
2	142	0.9—L
3	156	1.1
4	155	1.0
5	156	1.2—H
6	155	1.0
7	162	1.2
8	164	1.2
9	155	1.1
10	157	0.9
11	147	1.1
12	149	1.0
13	162	1.1
14	153	1.1
15	164	1.2
16	158	1.0
17	150	1.1
18	165	1.2
19	161	1.1
20	160	1.1
21	168	1.0
22	170—H	1.1
23	158	1.0
24	166	1.1
25	152	1.0
26	160	1.2
27	158	1.1
28	157	1.1
29	149	1.0
30	155	1.0
31	140—L	0.9
Average	156.35	1.07

No. 12 had a deformed back. No. 31 was dead.

*Crotalus viridis viridis* Rafinesque.

Young born to two females received from South Dakota, collected by A. M. Jackley in August, 1938.

I. Born on September 7, 1938. Parent weighed 297.4 g. and measured 946 mm. in length, to the base of the rattle.

No.	Length	Weight
1	281	14.9
2	282	13.8—L
3	286	15.1
4	290—H	15.2
5	273	14.2
6	274	14.3
7	251—L	14.1
8	259	14.2
9	270	14.8
10	279	15.6—H
11	277	15.5
Average	274.73	14.7

The eyes of all were overcast, indicative of an approaching moult.

II. Young born on September 10, 1938; two dead embryos also passed. Female undertermined; several others in cage.

No.	Length	Weight
1	256	14.8
2	271—H	15.6—H
3	237—L	11.6—L
4	249	12.8
5	253	12.8
Average	253.2	13.52

The "button" was included in measuring the young of both litters.

*Sternotherus odoratus* (Latreille).

A turtle of this species was collected early in June, 1936, by Byron Gardner, Jr., who found it in South Carolina directly across the Savannah River from Augusta, Georgia. It deposited 2 eggs on June 22.

No.	Length	Width	Weight
1	25	15.1	3.6
2	23.2	15.4	3.5
Average	24.1	15.25	3.55

On October 2, 1936, a baby was found walking about in the hatching media. That it may have emerged at some time previous is indicated by the fact that the other egg also had hatched, but the young had died and was badly desiccated. Data on the living one are as follows:

Carapace		Depth of	Plastron	Weight
Length	Width	Shell	Length	
22	18.9	12	15.8	2.2

*Chelydra serpentina serpentina* (Linnaeus).

A large snapper collected 3 miles north of New Castle, Delaware, on April 24, 1936, deposited 3 eggs in its tank on June 22, 1936.

No.	Diameter	Weight
1	27.2	10.8—H
2	26.8—L	9.7—L
3	29.5—H	10.7
Average	27.83	10.4

Since the nature of the tank prevented this turtle from nesting, the 3 eggs doubtless represent only a fraction of the entire complement. The specimen was transferred to a spacious, out-door enclosure but whether other eggs were laid was not determined.

*Terrapene carolina carolina* (Linnaeus).

A set of eggs probably found near Philadelphia, was given to the Philadelphia Zoological Garden by an anonymous donor. Young hatched on September 1 and 2, 1938.

No.	Carapace			
	Length	Width	Depth of Shell	Weight
1	34.6	33.3	16.6—L	7.9
2	33.3—L	32.1—L	16.7	7.8
3	34.9—H	33.5	17.0—H	8.4—H
4	33.7	33.7—H	16.8	7.6—L
Average	34.13	33.15	16.78	7.93

*Pseudemys floridana* ssp.

A female from central Florida laid 2 eggs in its tank on June 7, 1936.

No.	Length	Width	Weight
1	33.0	24.3	9.2
2	35.7	24.5	8.7
Average	34.35	24.4	8.95

As with the specimen of *Chelydra s. serpentina* above, conditions were not optimum for laying and the 2 eggs doubtless are but a part of the number the turtle might have been expected to lay.

*Testudo tornieri* Siebenrock.

Four of these tortoises were secured from a dealer on August 7, 1935. One of them, weighing 375.9 g., carapace length 144 mm., carapace width 106 mm., and depth of shell 38 mm., deposited an egg on January 9, 1937. This weighed 33.5 g. and measured 48 mm. in length by 28 mm. in width. As Loveridge (1928, p. 51) has noted, this remarkable turtle has a complement of only a single egg.

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